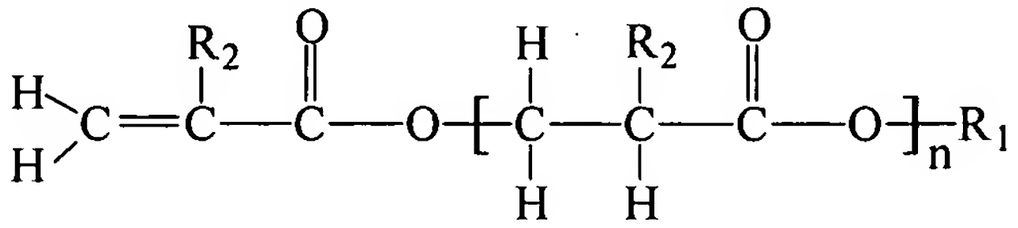
Amendments to the Claims:

1. (Currently Amended) A process for cleaving [[of a]] (meth)acrylic acid oligomers comprising the steps of:

providing at least one (meth)acrylic acid oligomer comprising a [[of]] structure I



I

wherein

R_1 is a hydrogen atom or a C_1 to C_{10} alkyl groups

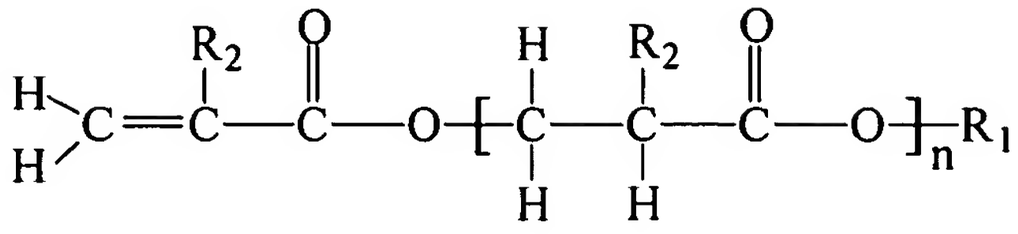
R_2 is a hydrogen atom or a methyl group, and

n is a whole number within the range between 1 and 200[[,]]; and

[[wherein the]] heating the at least one (meth)acrylic acid oligomer [[are heated]] to a temperature of at least 50°C at a pressure of at least 10 bar.

2. (Currently Amended) [[Process]] A process for cleaving [[of a]] (meth)acrylic acid oligomers comprising the steps of:

providing at least one (meth)acrylic acid oligomer comprising a [[of]]structure I



I

wherein

R_1 is a hydrogen atom or a C_1 to C_{10} alkyl groups

R_2 is a hydrogen atom or a methyl group, and

n is a whole number within the range between 1 and 200[[,]];

[[with]] providing a cleaving agent comprising a [[of]] structure II

R_3-OH

or [[of]] structure III

$(R_4)_2$-N-H

wherein

R_3 is a hydrogen atom, a C_1 to C_{12} alkyl group, or a -C_xH_{2x}-OH group, wherein x is a whole number within a range from 1 to 12, and

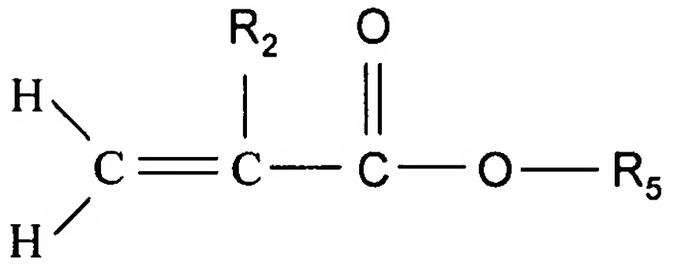
R_4 is a hydrogen atom or a C_1 to C_{12} alkyl group, with the proviso that not both R_4 groups are hydrogen atoms[[,]]; and

[[wherein the]] contacting the at least one (meth)acrylic acid oligomer [[is brought into contact]] with the cleaving agent at a temperature of at least 50 °C and at a pressure of at least 10 bar.

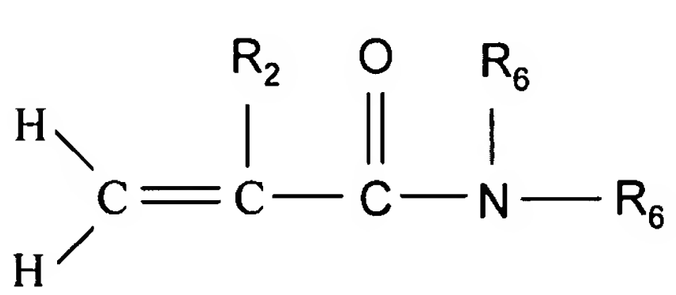
3. (Currently Amended) [[Process]] The process according to Claim 2, wherein the cleaving agent and the at least one (meth)acrylic acid oligomer are used in a [[weight ratio]] cleaving agent : (meth)acrylic acid oligomer weight ratio within a range from 0.01 : 1 to 10 : 1.

4. (Currently Amended) [[Process]] The process according to [[one of Claims]] Claim 2 [[or 3]], wherein the cleaving agent [[is]] comprises any one of water, ethanol, n-butanol, or a mixture of at least two of these compounds.

5. (Currently Amended) [[Process]] The process according to Claim 1 [[any one of the preceding Claims]], wherein [[by means of the]] a cleaving product comprises a compound comprising a [[of]] structure IV



or [[of]] structure V



[[is separated,]]

wherein

R_6 is an H atom or a $C_1 - C_{12}$ alkyl group, with the proviso that not both R_6 groups are hydrogen atoms,

R_5 is an H atom, a C_1-C_{12} alkyl group or a -C_xH_{2x}-OH- group, whereby x is a whole number within a range from 1 to 12, and

R_2 is an H atom or a methyl group.

6. (Currently Amended) [[Process]] The process according to Claim 1 [[any one of the preceding Claims]], wherein the least one (meth)acrylic acid oligomer [[are]] comprises [[used in the form of]] a composition [[, which is obtained as]] comprising a bottom product of the distillative work-up of [[the]] a (meth)acrylic acid solution in process step iii) during [[the]] a process for (meth)acrylic acid synthesis comprising the [[process]] steps of:

i) [[catalytic oxidation of]] catalytically oxidizing C_3 or C_4 starting compounds in [[the]] a gas phase[[,]];

ii) any one of absorbing, condensing, or absorbing and condensing [[absorption or condensation or both of the]] a formed (meth)acrylic acid in water[[,]]; and

iii) [[work-up of]] working-up the thus-obtained aqueous (meth)acrylic acid solution by distillation.

7. (Currently Amended) [[Process]] The process according to Claim 1 [[any one of the preceding Claims]], wherein the least one (meth)acrylic acid oligomer [[are]] comprises [[used in the form of]] a composition [[, which is obtained as]] comprising a mother liquor obtained during the purification by crystallization in process step IV) during [[the]] a process for (meth)acrylic acid synthesis comprising [[process]] steps of:

I) [[catalytic oxidation of]] catalytically oxidizing C_3 or C_4 starting compounds in [[the]] a gas phase[[,]];

II) any one of absorbing, condensing, or absorbing and condensing [[absorption or condensation or both of the]] formed (meth)acrylic acid in water to form an absorption product[[,]];

III) optionally, [[work-up of]] working-up the thus-obtained aqueous (meth)acrylic acid solution by distillation[[,]]; and

IV) purifying [[purification]] by crystallization [[of]] the absorption product or [[of the]] purifying by crystallization a concentrated (meth)acrylic acid solution obtained by distillation or purifying by crystallization the absorption product and purifying by crystallization a concentrated (meth)acrylic acid solution obtained by distillation [[of both]].

8. (Currently Amended) [[Process]] The process according to Claim 2 [[any one of Claims 2 to 7]], wherein the contacting of the at least one (meth)acrylic acid oligomer [[is brought into contact]] with the cleaving agent occurs at a temperature of at least 250°C.

9. (Currently Amended) [[Process]] The process according to Claim 1 [[any one of the preceding Claims]], further comprising providing [[wherein the cleaving occurs in the presence of]] a catalyst.

10. (Currently Amended) [[Use]] Using a compound comprising a [[of compounds of]] structure II

R_3-OH

wherein

R_3 is a hydrogen atom, a C_1 to C_{12} alkyl group, or a $-C_xH_{2x}$-OH group, wherein x is a whole number within a range from 1 to 12, or

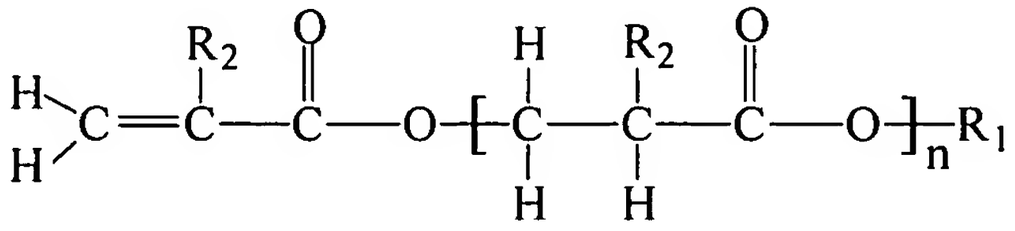
structure III

$(R_4)_2$-N-H

wherein

R_4 is a hydrogen atom or a C_1 to C_{12} alkyl group, with the proviso that not both R_4 groups are hydrogen atoms,

[[or of structure III, as defined in Claim 2,]] as a cleaving agent for cleaving [[of]] at least one (meth)acrylic acid oligomer [[of]] comprising a structure I



I

wherein

R_1 is a hydrogen atom or a C_1 to C_{10} alkyl groups

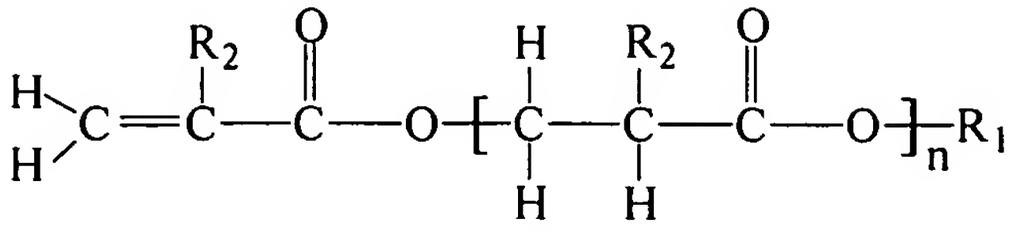
R_2 is a hydrogen atom or a methyl group, and

n is a whole number within the range between 1 and 200,

at a temperature of at least 50 °C and at a pressure of at least 10 bar.

11. (Currently Amended) [[Device]] A device for production of (meth)acrylic acid comprising as components connected with each other in fluid-communicating fashion a (meth)acrylic acid synthesis unit, a quench absorber, a distillation device and/or a crystallization device, [[as well as]] and a (meth)acrylic acid oligomer cleaving device, wherein the (meth)acrylic acid oligomer cleaving device comprises a cleaving agent reservoir [[(6)]], at least one first and one second conveyor unit, a mixing device [[(5)]], a heating device [[(10)]], a cleaving reactor and at least a first to fifth conduit, wherein

(β1) a reactant pump [[(4)]] as the first conveyor unit comprises a feed line, which communicates a composition comprising [[a]] at least one (meth)acrylic acid oligomer comprising a structure I: [[as defined in Claim 1 or 2]]



I

wherein

R_1 is a hydrogen atom or a C_1 to C_{10} alkyl groups

R_2 is a hydrogen atom or a methyl group, and

n is a whole number within the range between 1 and 200;

(β2) the cleaving agent reservoir [[(6) is]] communicating by a cleaving agent line [[(7)]] as first conduit to a cleaving agent pressure pump [[(9)]] as second conveyor unit;

(β3) the first and the second conveyor unit [[(4, 9) are]] communicating [[to]] with the mixing device [[(5)]] by a second and third conduit;

(β4) the mixing device [[(5) is]] communicating [[to]] with the heating device [[(10)]] by a fourth conduit; and

(β5) the heating device [[(10) is]] communicating [[to]] with the cleaving reactor by a fifth conduit,

wherein the oligomer cleaving device comprises a release valve [[(12)]], by means of which the cleaving product of the (meth)acrylic acid oligomer cleaving situated in the heating device [[(10)]] can be expanded.

12. (Currently Amended) [[Device]] The device according to Claim 11, wherein the composition which is communicated in the feed line to the first conveyor unit corresponds to [[the composition defined in claim 6]] at least one (meth)acrylic acid oligomer comprising a composition comprising a bottom product of the distillative work-up of a (meth)acrylic acid

solution in process step iii) during a process for (meth)acrylic acid synthesis comprising the steps of:

i) catalytically oxidizing C_3 or C_4 starting compounds in a gas phase;

ii) any one of absorbing, condensing, or absorbing and condensing a formed (meth)acrylic acid in water; and

iii) working-up the thus-obtained aqueous (meth)acrylic acid solution by distillation.

13. (Currently Amended) [[Device]] The device according to Claim 11, wherein the composition which is communicated in the feed line to the first conveyor unit corresponds to [[the composition defined in claim 6 or 7]] at least one (meth)acrylic acid oligomer comprising a composition comprising a mother liquor obtained during the purification by crystallization in process step IV) during a process for (meth)acrylic acid synthesis comprising steps of:

I) catalytically oxidizing C_3 or C_4 starting compounds in a gas phase;

II) any one of absorbing, condensing, or absorbing and condensing formed (meth)acrylic acid in water to form an absorption product;

III) optionally, working-up the thus-obtained aqueous (meth)acrylic acid solution by distillation; and

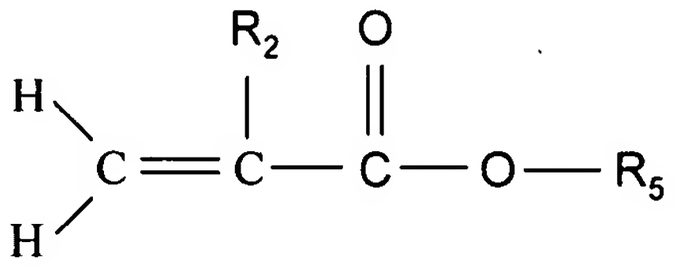
IV) purifying by crystallization the absorption product or purifying by crystallization a concentrated (meth)acrylic acid solution obtained by distillation or purifying by crystallization the absorption product and purifying by crystallization a concentrated (meth)acrylic acid solution obtained by distillation.

14. (Currently Amended) [[Use of]] Using a device according to [[any one of Claims]] Claim 11 [[to 13]] for a production of (meth)acrylic acid.

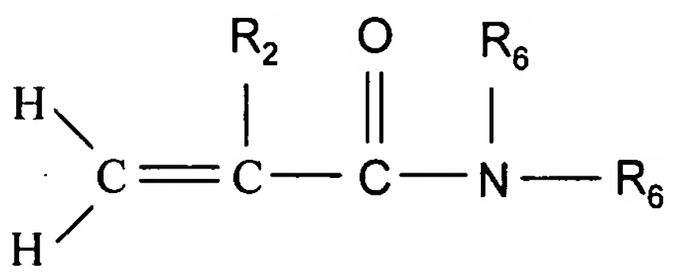
15. (New) Using a device according to Claim 12 for a production of (meth)acrylic acid.

16. (New) Using a device according to Claim 13 for a production of (meth)acrylic acid.

17. (New) The process according to Claim 2, wherein a cleaving product comprises a compound comprising a structure IV



or structure V



wherein

R_6 is an H atom or a C_1-C_{12} alkyl group, with the proviso that not both R_6 groups are hydrogen atoms,

R_5 is an H atom, a C_1-C_{12} alkyl group or a $-C_xH_{2x}$-OH- group, whereby x is a whole number within a range from 1 to 12, and

R_2 is an H atom or a methyl group.

18. (New) The process according to Claim 2, wherein the at least one (meth)acrylic acid oligomer comprises a composition comprising a bottom product of the distillative work-up of a (meth)acrylic acid solution in process step iii) during a process for (meth)acrylic acid synthesis comprising the steps of:

i) catalytically oxidizing C_3 or C_4 starting compounds in a gas phase;

ii) any one of absorbing, condensing, or absorbing and condensing a formed (meth)acrylic acid in water; and

iii) working-up the thus-obtained aqueous (meth)acrylic acid solution by distillation.

19. (New) The process according to Claim 2, wherein the at least one (meth)acrylic acid oligomer comprises a composition comprising a mother liquor obtained during the purification by crystallization in process step IV) during a process for (meth)acrylic acid synthesis comprising steps of:

I) catalytically oxidizing C_3 or C_4 starting compounds in a gas phase;

II) any one of absorbing, condensing, or absorbing and condensing formed (meth)acrylic acid in water to form an absorption product;

III) optionally, working-up the thus-obtained aqueous (meth)acrylic acid solution by distillation; and

IV) purifying by crystallization the absorption product or purifying by crystallization a concentrated (meth)acrylic acid solution obtained by distillation or purifying by crystallization the absorption product and purifying by crystallization a concentrated (meth)acrylic acid solution obtained by distillation.

20. (New) The process according to Claim 2, further comprising providing a catalyst.